

Patent Claims

1. A polyoxymethylene with improved resistance to acids, comprising
- 5 A from 84 to 99.79% by weight of at least one polyoxymethylene homo- or copolymer,
B from 0.1 to 5% by weight of at least one polyalkylene glycol,
C from 0.1 to 10% by weight of zinc oxide, and
10 D from 0.01 to 1% by weight of one or more nitrogen-containing costabilizers,
where the total of the percentages by weight of components A to D is 100%.
2. A polyoxymethylene as claimed in claim 1, wherein the proportion of polyalkylene glycol is from 0.5 to 5% by weight.
- 15 3. A polyoxymethylene as claimed in claim 1 or 2, wherein the proportion of zinc oxide is from 0.5 to 5% by weight.
- 20 4. A polyoxymethylene as claimed in any of claims 1 to 3, wherein the nitrogen-containing costabilizer used comprises at least one amino compound, amide compound, hydrazine compound or urea compound or a hindered amine, preferably melamine.
- 25 5. A polyoxymethylene as claimed in any of claims 1 to 4, wherein the proportion of nitrogen-containing costabilizers is from 0.03 to 0.3% by weight.
- 30 6. A polyoxymethylene as claimed in any of claims 1 to 5, wherein test specimens in the form of ISO $\frac{1}{2}$ tensile specimens of thickness 1 mm produced from pellets obtained by melting and pelletizing a mixture made from components A to D, which on each of five days in succession were fully immersed for 20 seconds in an aqueous solution made from 10% by weight of phosphoric acid and 1% by weight of Mersolat H 40®, were then removed and, without wiping
35 off any adhering acid/surfactant solution, aged freely suspended for 24 hours in an environment with controlled temperature and humidity, at 23°C and a relative humidity of about 30%, and then

aged for a further 9 days suspended in the environment with controlled temperature and humidity, show a relative weight difference of less than 15% compared with test specimens produced in the same way but not exposed to the acid/surfactant solution.

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7. A polyoxymethylene as claimed in claim 6, wherein the relative change in weight of the test specimens made from components A to D is one third or less of the relative change in weight determined on test specimens made from 100% by weight of component A.

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8. The use of a polyoxymethylene as claimed in any of claims 1 to 7 for producing moldings for use in contact with aggressive acids or with aggressive acid-containing cleaning agents.

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9. The use of moldings made from a polyoxymethylene as claimed in any of claims 1 to 7 for applications in the sanitary sector or the white goods sector.

10. The use of

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B from 0.1 to 5% by weight of at least one polyalkylene glycol,
C from 0.1 to 10% by weight of zinc oxide, and
D from 0.01 to 1% by weight of one or more nitrogen-containing costabilizers,

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with from 84 to 99.79% by weight of at least one polyoxymethylene homo- or copolymer (A), where the total of the percentages by weight of components A to D is 100%, for improving the acid resistance of the polyoxymethylene homo- or copolymer, or of moldings produced therefrom.